

NAKASEETA FOUNDATION CHRISTIAN PRIMARY
SCHOOL PRIMARY SEVEN REVISIONTOPICAL
QUESTIONS

MATHEMATICS

Time allowed 2 hours 15 minutes

INDEX:

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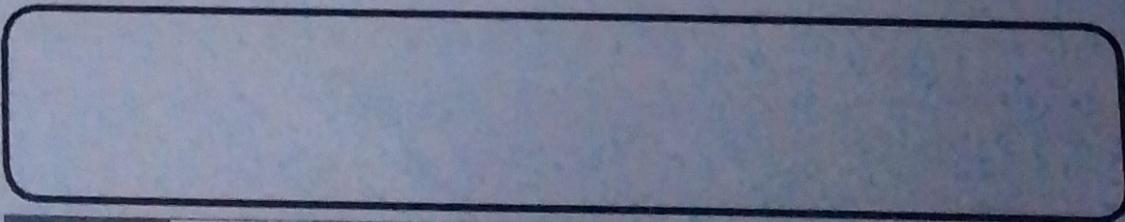
Name of Pupil: NANTONGO.....LETICIA.....

Signature: Nantongo.....Leticia.....

Read the following instructions carefully:

1. All answers must be written using blue or black pointed pen or ink. Diagrams should be drawn in pencil.
2. Unnecessary alteration of work may lead to loss of marks.
3. Any illegible handwriting may lead to loss of marks.

TEACHERS COMMENT TO THE LEARNER



SECTION A: (40 MARKS)

ANSWER ALL QUESTIONS IN THIS SECTION.

Questions 1 to 20 carry two marks each.

1. Workout: $714 \div 7$

$$\begin{array}{r} 102 \\ 7 \overline{)714} \\ -7 \\ \hline 14 \\ -14 \\ \hline 0 \end{array}$$

Therefore, $714 \div 7 = 102$

3. If $P = \{1, 2, 3, 4, 5\}$ and
 $Q = \{a, b, c, d, e\}$. Find $n(P \cap Q)$

$$n(P \cup Q) = 1, 2, 3, 4, 5$$

$$n(P \cap Q) = 0$$

5. A school bursar deposited a bundle of twenty thousand shilling notes to the bank numbered from AB855801 to AB855900. How much money did the bursar deposit?

$$AB855801 - AB855900 \quad \cancel{\text{sh. } 20000}$$

$$AB855801 \quad \times \text{ sh. } 20,000$$

$$AB855900$$

$$1 \times 801 \quad 9 \times \text{ sh. } 200 \times 9$$

$$1801 \quad - \text{ sh. } 1800$$

7. Okwaja is standing in the tenth position from the either sides of the line of teachers. How many teachers are in the line altogether?

$$1 \quad 2 \quad 3 \quad 4 \quad 5 \quad 6 \quad 7 \quad 8 \quad 9 \quad 10$$

9 teachers

9. Use distributive property only to work out $(25 \times 1.5) + (75 \times 1.5)$

$$(25 \times 1.5) + (75 \times 1.5) = 1.5(25 + 75) = 1.5(100)$$

2. Write "One hundred thousand, one" in numerals.

$$\text{One hundred thousand} = 100,000$$

One

$$\begin{array}{r} 1 \\ 0 \\ 0 \\ , \\ 0 \\ 0 \\ 0 \end{array}$$

4. Write XLIV in Hindu Arabic numerals.

$$XLIV = 40 + 4$$

$$XLIV = 44$$

6. Find the next number in the sequence below.

$$1, 3, 6, 11, 18, \underline{27}$$

$$\begin{array}{r} 1 \\ 3 \\ 6 \\ 11 \\ 18 \\ \hline 27 \end{array}$$

8. Express 10011_{two} as a decimal base.

1	0	0	1	1	0
1	0	0	1	1	0
1	0	0	1	1	0

$$1 \times 2^0 + 0 \times 2^1 + 0 \times 2^2 + 1 \times 2^3 + 1 \times 2^4 + 0 \times 2^5 + 1 \times 2^6$$

$$1 + 0 + 0 + 2 + 4 + 0 + 16$$

$$19_{\text{ten}}$$

10. Write 0.000438 in standard form.

$$\begin{aligned} 0.000438 &= 0.000438 \times 10 \\ 0.000438 &= 0.000438 \times 10 \\ 0.000438 &= 0.000438 \times 10 \\ 0.000438 &= 0.000438 \times 10 \end{aligned}$$

$$1 \cdot 5 \times 100$$

$$\frac{1}{10} \times 100$$

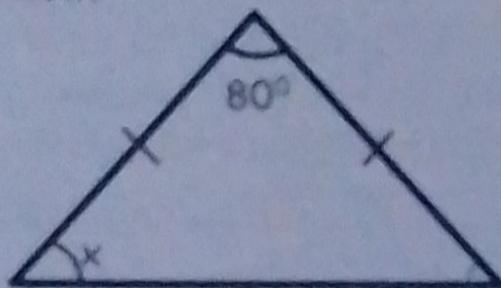
$$150$$

11. The ratio of boys to girls is 2:3. When increased by p, it becomes 14:15. Find the value of p.

Total ratio $2+3=5$

<u>Boys</u>	$2 \times 14 = 28$	$3 \times 15 = 45$
$\frac{2}{5}$	$\frac{28}{35}$	$\frac{3}{5}$
$\frac{3}{5} \times 4 = 12$	$\frac{35}{35} \times 5 = 5$	$\frac{3}{5} \times 3 = 9$
$\frac{2}{5} + \frac{12}{35} = \frac{35}{35}$	$\frac{5}{5} + \frac{9}{35} = \frac{44}{35}$	$\frac{9}{35} = \frac{1}{5}$
$P = 35$		

13. Find the value of x in the figure below.



$x+x = 2x$	$\frac{2x}{2} = x$
$x+80 = 90$	$x = 5$
$2x+80 = 90$	
$2x+80-80 = 90-80$	
$2x = 10$	

15. A man's stride is 30cm. How many strides does he have to make to cover a distance of 150 metres?

1 cm = 100m	
30cm = 30×100 m	They are 1500cm
1000m = 100m	The stride is 150cm
150m = 10×150 cm	
= 1500cm	

17. Evaluate $a^2 - b$ if $a=3$ and $b=2$.

$$\begin{aligned}
 a^2 - b &= 3^2 - 2 \\
 &= 9 - 2 \\
 &= 7
 \end{aligned}$$

$$\begin{aligned}
 0000438 &= 0000438 \times 10 \\
 0000438 &= 0000438 \times 10 \\
 &= 0000438 \times 10
 \end{aligned}$$

12. Mr. Esau deposited sh. 240 000 in Stanbic bank at the interest rate of 15% per year for 9 months. Find his simple interest.

$$\begin{aligned}
 \text{Simple interest} &= P \times R \times T \\
 &= \text{sh. } 240,000 \times 15 \times \frac{9}{100} \\
 &= \text{sh. } 240,000 \times 15 \times \frac{9}{100} \\
 &= \text{sh. } 240,000 \times \frac{135}{100} \\
 &= \text{sh. } 32,400
 \end{aligned}$$

14. Simplify: $-4 - 11$

$$\begin{array}{r}
 -4 \\
 -4 + 11 \\
 \hline
 7
 \end{array}$$

16. Find the square root of 64.

$$\begin{array}{r}
 64 = \frac{3 \times 16 + 4}{16} \\
 = \frac{4 \times 16}{16} \\
 = \sqrt{25} \\
 \sqrt{25} = \frac{25}{5} \\
 15 \times 1 \\
 5
 \end{array}$$

18. In a class of 32 boys, the ratio of boys to girls is 2:3. Find the number of girls in the class.

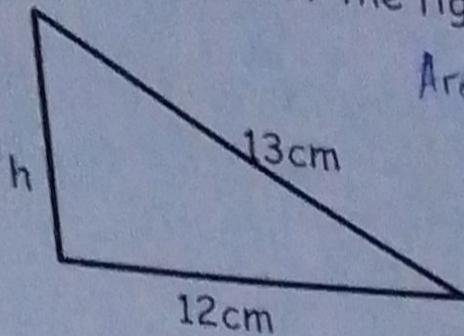
$$\begin{array}{l}
 \text{Total ratio} \\
 2+3=5 \\
 \text{Number of girls} \\
 \text{Let number of girls be } k
 \end{array}$$

$$3 \times 32$$

$$\begin{aligned} S &= 32 \\ 3K &= 32 \times 5 \\ 3K &= 160 \\ K &= \frac{160}{3} \end{aligned}$$

$$K = 52$$

19. Find the area of the figure below.



$$\begin{aligned} \text{Area} &= \frac{1}{2} \times b \times h \\ &= \frac{1}{2} \times 12 \times h \\ &= \frac{1}{2} \times 12 \times 5 \\ &= 60 \text{ cm}^2 \\ &= 6 \text{ cm}^2 \end{aligned}$$

20. Solve: $2^{2x} = 64$.

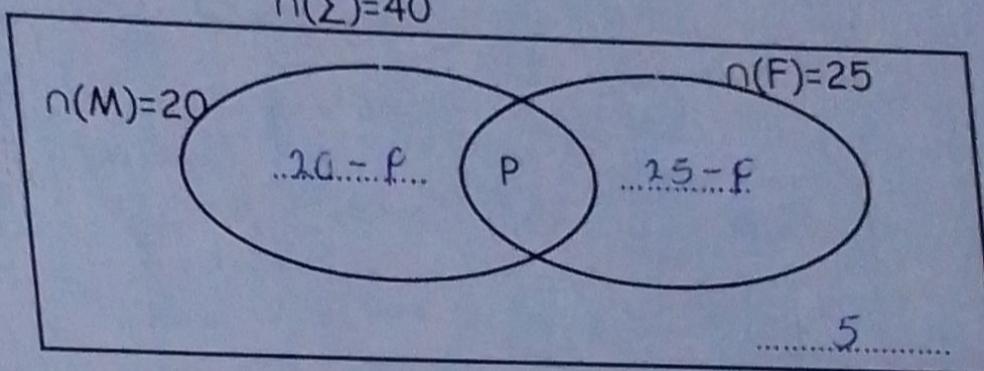
$$\begin{aligned} 2^{2x} &= 64 \\ 2 \times 2x &= 64 \\ 4x &= 64 \\ \frac{4x}{4} &= \frac{64}{4} \\ x &= 16 \end{aligned}$$

SECTION B (60 MARKS)

21. In a class of 40 candidates, all like chicken (C), 20 like meat (M) and chicken, 25 like fish (F) and chicken, p like all the three types of food while 5 candidates like chicken only.

a) Complete the Venn diagram below.

(3 marks)

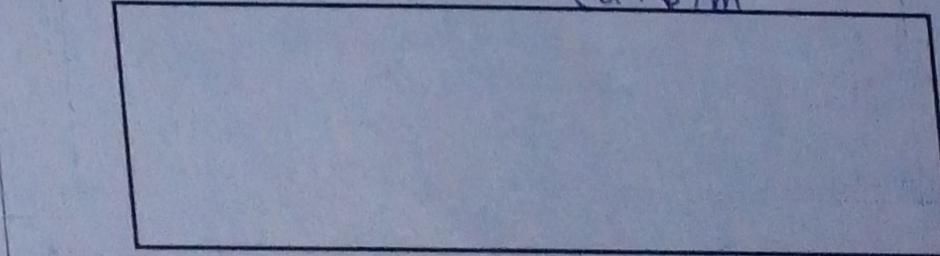


b) How many candidates like all the three types of food? (2 marks)

$$\begin{aligned} 20 - p + p + 25 - p + 5 &= 40 \\ -p + p - p + 20 + 25 + 5 &= 40 \\ -p + 50 &= 40 \\ -p + 50 - 50 &= 40 - 50 \\ -p &= -10 \end{aligned}$$

$-p = -10$
$\frac{-p}{1} = \frac{-10}{1}$
$p = 10$

22. The figure below is a rectangle whose perimeter is 46m. Use it to answer the questions that follow. $(a+6)m$



$$\begin{aligned} (a+6) &= 23 \\ a-1 &= 11 \end{aligned}$$

a) Find the value of a . (a + 6)m

$$(a+6)m + (a-1)m$$

$$(a+a+6-1)m$$

$$\begin{array}{r} 2a + 5m \\ \hline 7am \end{array}$$

(2 marks)

b) Work out the area of the figure above.

$$\text{Area} = L \times W$$

$$= (a+6)m \times (a-1)m$$

$$= (7+6)m \times (7-1)m$$

$$= 13m \times 6m$$

$$= 78m^2$$

23. Mary went to the market and bought the following items.

- 2kg of meat at sh. 8,000 per kg.
- $\frac{11}{4}$ kg of sugar at sh. 6,000 each kg.
- 500g of maize flour at sh. 3,000 per kg.
- 12 tomatoes at sh. 1,000 for every 3 tomatoes.

a) How much money did she spend altogether?

meat

1kg costs sh. 8,000

2kg cost sh. 8000×2

$$= \text{sh. } 16,000$$

sugar

1kg costs sh. 6,000

$\frac{11}{4}$ kg cost sh. $6000 \times \frac{5}{4}$

$$= \text{sh. } 1500 \times \frac{5}{4}$$

sh. $1500 \times \frac{5}{4}$

Sh. 7500

maize flour

kg costs

1g = $\frac{1}{1000} \text{ kg}$

500g = $\frac{1}{1000} \times 500 \text{ kg}$

= $\frac{1}{2} \text{ kg}$

1kg costs sh. 3000

$\frac{1}{2} \text{ kg}$ costs sh. $3000 \times \frac{1}{2}$

$$= \text{sh. } 1500$$

2kg cost sh. $3000 \times 2 = \text{sh. } 6000$

Sh. 6000

+ 3 tomatoes

tomatoes a $\frac{1}{3}$,

3 tomatoes cost sh. 1000

16 tomatoes cost sh. 1000×6

$$= \text{sh. } 6000$$

Total expenditure

sh. 16000

sh. 7500

sh. 6000

sh. 6000

Sh. 35500

b) If she was given a change of sh. 21,000, how much money did she have at first?

sh. 35500

+ sh. 21000

sh. 56,500

At first she has sh. 56,500

24. The sum of three consecutive even numbers is 66. If the last number is r ,

a) Find the numbers.

1 st no	2 nd no	3 rd no	sum
$r+4$	$r+2$	r	66
$r+4+r+2+r$	$= 66$		
$r+r+r+4+2$	$= 66$		
$3r+6$	$= 66$		
$3r+6-6$	$= 66-6$		

(3 marks)

$$\begin{aligned} 3r+6 &= 66 \\ r &= 20 \\ r &= 20 \end{aligned}$$

11
$1 \times 2 = 2$
$4 \times 2 = 8$
$4 \times 3 = 12$
$4 \times 4 = 16$
$4 \times 5 = 20$
$4 \times 6 = 24$
$4 \times 7 = 28$
$4 \times 8 = 32$
$4 \times 9 = 36$
$4 \times 10 = 40$
$4 \times 11 = 44$
$4 \times 12 = 48$

11
$1 \times 2 = 2$
$4 \times 2 = 8$
$4 \times 3 = 12$
$4 \times 4 = 16$
$4 \times 5 = 20$
$4 \times 6 = 24$
$4 \times 7 = 28$
$4 \times 8 = 32$
$4 \times 9 = 36$
$4 \times 10 = 40$
$4 \times 11 = 44$
$4 \times 12 = 48$

b) Workout the range of the numbers. (1 mark)

Range = highest - lowest
 $= 24 - 20$
 $= \underline{\underline{4}}$

25. The table below shows marks scored by some pupils.

Marks	80	k	70	90
No. of pupils	2	4	3	1

a) How many pupils did the test? (2 marks)

$$\text{No. of pupils} = 2 + 4 + 3 + 1$$

$$(2 + 4) + (3 + 1)$$

$$6 + 4$$

b) Find the value of k if the mean mark is 66. (3 marks)

$$\begin{array}{lcl} 80 + k + 70 + 90 & = 66 \\ -1k + 80 + 70 + 90 & = 66 \\ -1k + 240 & = 66 \\ -k + 240 - 240 & = 66 - 240 \\ -k + 0 & = 174 \end{array}$$

$$\begin{array}{rcl} -1k & = 174 \\ \hline 1 & & 1 \\ & & 1 \\ \hline 1k & = 174 \end{array}$$

26. The table below shows the arrival and the departure time of the bus from Kampala to Tororo. Use it to answer the questions that follow.

Town	Arrival	Departure
Kampala		7:00am
Jinja	8:45am	9:00am
Iganga	10:00am	10:20am
Bugiri	11:00am	11:15am
Tororo	12:00noon	

a) How long did the bus take to travel from Iganga to Tororo? (2 marks)

Time taken = Ending time - Starting time

$$\begin{array}{r} 10.20 \text{ am} \\ - 8.45 \text{ am} \\ \hline 1.15 \text{ am} \end{array}$$

It took 20 minutes

b) For how long did the bus stay in Jinja?

It took 15 mins

8:45 am
8:45 am

15 min

c) If the distance from Kampala to Tororo is 255km, calculate the average speed at which the bus was traveling.

$$\text{Average speed} = \frac{\text{Distance}}{\text{Time}}$$

$$= \frac{225 \text{ km}}{1.5 \text{ hr}}$$

$$= 150 \text{ km/hr}$$

27. Mulokosi is twice as old as his brother now. In 5 years' time, their total age will be 40 years.

a) How old is Mulokosi's brother now? (4 marks)

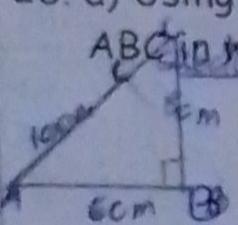
$\begin{array}{l} \text{Brother: } M \\ M + 2M = 40 \\ 3M = 40 \\ M = \frac{40}{3} \end{array}$	$\begin{array}{l} \text{Mulokosi's age: } B \\ B + 2B = 40 \\ 3B = 40 \\ B = \frac{40}{3} \end{array}$
-------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------

b) How old will Mulokosi be in 5 years' time? (1 mark)

$$\text{Mulokosi in 5 years' time} = \frac{40}{3} + 5$$

$$= 50 \text{ years old}$$

28. a) Using a ruler, a pencil and a pair of compasses only, construct a triangle ABC in which AB=6cm, BC=8cm and AC=10cm (4marks)



b) Measure angle ABD ABC (1 mark)

$$\underline{ABC = 90^\circ}$$

29. Pautinoh, Robbinoh and Ronaldinoh shared a certain amount of money in the ratio of 2:3:4 respectively. If Robbinoh got sh. 90,000.

a) Find their total share.

$$\begin{aligned} \text{Total ratio} &= 2+3+4 \\ &= 9 \end{aligned}$$

(3 marks)
Let their total share be x

b) How much more money did Ronaldinho get than Pautinoh? (2 marks)

$$\begin{array}{r} \text{Sh. } 40,000 \\ - \text{Sh. } 20,000 \\ \hline \text{Sh. } 20,000 \end{array}$$

Ronaldinho got sh. 20,000 than Pautinoh.

30. The interior and exterior angles are in the ratio of 7:2.

a) Find the size of each angle. (3 marks)

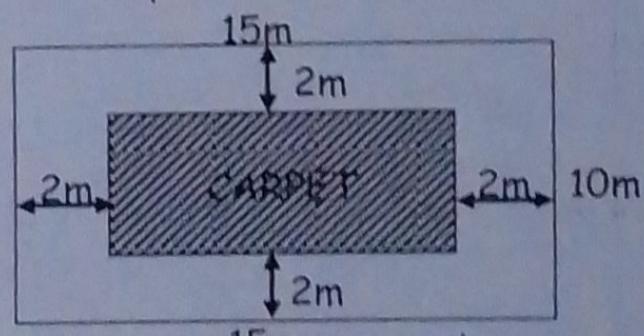
Total ratio = 7+2 =	<u>exterior angle</u>
<u>Interior angle</u> = <u>1</u>	$\frac{2}{9} \times 180$
$\frac{7}{9} \times 180$	$\frac{2}{9} \times 180$
$\frac{7}{9} \times 180$	$\frac{2}{9} \times 180$
$\frac{7}{9} \times 180$	<u>40°</u>

b) Calculate its interior angle sum. (2 marks)

$$\begin{aligned} \text{Interior angle sum} &= 180(n-2) \\ &= 180(40-2) \\ &= 180(38) \\ &= 180 \times 38 \\ &= 1920 \end{aligned}$$

$$\begin{array}{r} 180 \\ \times 38 \\ \hline 1440 \\ 540 \\ \hline 6840 \end{array}$$

31. The figure below represents the sitting room of 15m by 10m with a carpet placed in the middle. Use it to find the area of the space that is not covered by the carpet. (5 marks)



Area = Length

$$\begin{aligned} &= 15m(2m + 2m) \\ &= 15m(4m) \\ &= 15m \times 4m \\ &= 60m^2 \end{aligned}$$

Width

$$\begin{aligned} &= 10m(2m + 2m) \\ &= 10m(4m) \\ &= 10m \times 4m \\ &= 40m^2 \end{aligned}$$

Area

$$\begin{aligned} &= L \times W \\ &= 60m \times 40m \\ &= 2400m^2 \end{aligned}$$

32. Given that $y = x - 2$. Complete the table below. (5 marks)

x	-2	-5	0	-9	2
y	-3	-7	-3	-8	-1

$$x = -2 + \cancel{3}$$

$$\underline{-2 - 3} = -5$$

$$y = -2 + \cancel{5}$$

$$\underline{-2 - 5} = -7$$

$$y = 3 + \cancel{5} = -8$$

$$\underline{-3 - 5} = -8$$

$$x = -8 + \cancel{1}$$

$$\underline{-8 - 1} = -9$$

$$y = 9 + \cancel{1}$$

$$\underline{-9 - 1} = -10$$